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10/781,497	02/17/2004	Sankar Jayaram	TR24-006	3108

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ART UNIT	PAPER NUMBER
2123	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	10/781,497	JAYARAM ET AL.
Office Action Summary	Examiner	Art Unit	
	KIDEST BAHTA	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 March 2008*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-42* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

Claim Rejections. 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section

102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the

subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary

skill in the art to which said subject matter pertains.

2.   The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1,148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.

3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or

nonobviousness.

4.   Claims 1-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Rappaport (U.S. Patent 6,614,430) in view of LaCourse ("3Dmodelserver translates and

heals models via the web", CADalyst: February 2000), and further in view of Rappaport

(U.S. Patent 6,828,963) and Dimsdale (US 6,420,698).

Regarding claims 1-42, Rappaport discloses,

Rappaport '430 teaches a method for managing computational geometry system translations (CL3, L58-61), comprising: receiving source geometric data at the apparatus within a memory (CL4, L65 to CL5, L22); and generating target geometric data using the source geometric data (CL3, L64-66.

Rappaport '430 does not expressly teach providing a server and at least one client within a client/server network environment; and receiving source geometric data at the server within a memory.

LaCourse teaches providing a server and at least one client within a client/server network environment; and receiving source geometric data at the server within a memory (Page 48, CL1, Para 3). It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to modify the method of Rappaport '430 with the method of LaCourse that included providing a server and at least one client within a client/server network environment; and receiving source geometric data at the server within a memory because that would allow a web based server to provide translation service to various users to translate the CAD data files from one format to another and identify the discrepancies and correct them using a healing process at a small cost (Page 48, CL1, Para 5 and 6; CL2, Para 1; Page 50, Fig. 4; Page 50, CL1, Para 4 to CL2, Para 1).

Rappaport '430 teaches verifying that the instances generated by several

different parameter vectors are geometrically identical up to a certain tolerance (CL12,

L21-24). Rappaport '430 does not expressly teach identifying discrepancies between

the target geometric data and the source geometric data by comparing the target

geometric data with the source geometric data. Rappaport '963 teaches identifying

discrepancies between the target geometric data and the source geometric data by

comparing the target geometric data with the source geometric data (Fig. 5B, Items 534

and 535; CL7, L51 to CL8, L8). It would have been obvious to one of ordinary skill in the

art at the time of Applicants' invention to modify the method of Rappaport '430 with the

method of Rappaport '963 that included identifying discrepancies between the target

geometric data and the source geometric data by comparing the target geometric data

with the source geometric data because that would allow testing the discrepancy

against the accepted tolerances associated with the target system; if the discrepancy

was within the tolerance of the target system, it could be accepted; if not the target

feature could be adjusted; if the discrepancy could not be adjusted, a failure notification

could be sent to the data translation process originator(CL7, L59 to CL8, L8); as per

Rappaport '430 it would allow the user correct errors that the translator program could

not correct automatically (CL13, L62-54).

Rappaport '430 teaches aider identifying a discrepancy, further comprising

notifying a user of the client of the discrepancy (CL11, L67 to CL12, L11; CL12, L16-

24); the source geometric data comprises comparison reference data extracted from a

pre-existing source model (CL3, L61-64; CL5, L2- 4); and the target geometric data

comprises corresponding comparison reference data created in a target model generated using the pre-existing source model (CL3, L58-61; CL3, L64-66: CL5, L4-6); receiving the pre-existing source model, further comprising opening the source model using a source CAD system (CL3, L61-64); reference data is extracted from the pre-existing source model (CL3, L61-64; CL5, L2-4); storing the extracted comparison reference data in a metafile format (CL4, L9-11; Fig. 1B, Items 165 and 170); storing the extracted comparison reference data in a metafile format (CL4, L9-11; Fig. 1B, Items 165 and 170).

Rappaport '430 does not expressly teach a client and a server provided by a common device. LaCourse teaches a client and a server provided by a common device (CL1, Para 3).

Rappaport '430 does not expressly teach that the comparison reference data comprises point cloud data. Dimsdale teaches that the comparison reference data comprises point cloud data (Abstract; CL1, L9-21). It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to modify the method of Rappaport '430 with the method of Dimsdale that included the comparison reference data comprising point cloud data because the points of the point cloud data each would indicate a location of corresponding point on the surface of the object; a first model could be generated in the target system responsive to the point cloud, the first model representing constituent geometric shapes of the object; a data file could be generated responsive to the first model and input to the target CAD system (Abstract, L3-9).

Rappaport '430 teaches a machine-executed method for implementing a

geometric conversion on a computer system including an interface (CL3, L58-61; Fig.

1A and 1B; CL4, L65 to CL5, L22), the method comprising: receiving a source

geometric model at a computer; and storing the source geometric model in memory of

the computer (CL4, L65 to CL5, L22); converting the source geometric model to a target

geometric model (CL4, L65-CL5, L22); extracting source comparison reference data

from the source geometric model(CL3, L61- 64; CL5, L2-4); and extracting target

comparison reference data from the target geometric model (CL3, L58- 61; CL3, L64-

66: CL5, L4-6). Rappaport '430 teaches verifying that the instances generated by

several different parameter vectors are geometrically identical up to a certain tolerance

(CL12, L21-24). Rappaport '430 does not expressly teach comparing the comparison

reference data from one of the source geometric model and the target geometric model

with geometry from one of the target geometric model and the source geometric model,

respectively, to identify geometric discrepancies therebetween. Rappaport '963 teaches

comparing the comparison reference data from one of the source geometric model and

the target geometric model with geometry from one of the target geometric model and

the source geometric model, respectively, to identify geometric discrepancies

therebetween (Fig. 5B, Items 534 and 535; CL7, L51 to CL8, L8).

Rappaport '430 teaches responsive to comparing, interrupting a user at the

interface when a geometric discrepancy is identified (CL11, L67 to CL12, L11; CL12,

L16- 24); responsive to converting, interrupting a user at the interface when a problem

is encountered during converting the source geometric model to the target geometric

model (CL11, L67 to CL12, L11; CL12, L16-21).

Rappaport '430 teaches processing circuitry configured to generate a target

model from a source model (CL3, L58-61; Fig. 1A and 1B, CL4, L65 to CL5, L22);

memory configured to store the source model and the target model (CL4, L65 to CL5,

L22); and comparison circuitry configured to identify selected points from the source

model, create corresponding selected points in a target model (CL4, L65 to CL5, L22).

Rappaport '430 does not expressly teach a geometric model comparator comprising

comparison circuitry configured to compare the selected points from the source model

with the target model to identify geometric entities from the target model that fall outside

of a predetermined tolerance range with the respective one or more points from the

source mode. Rappaport '963 teaches a geometric model comparator comprising

comparison circuitry configured to compare the selected points from the source model

with the target model to identify geometric entities from the target model that fall outside

of a predetermined tolerance range with the respective one or more points from the

source mode (Fig. 5B, Items 534 and 535; CL7, L51 to CL8, L8).

Rappaport '430 teaches that the comparison circuitry implements a forward

comparison between the selected points from the source model and the respective

geometry of the target model (CL3, L58-66; CL5, L1-6); the comparison circuitry

implements a reverse comparison between the geometry of the source model and the

respective selected points from the target model (CL4, L4-6; CL5, L12-13).

Rappaport '430 teaches bi-directional translation between one of the geometry of the source model and the geometry of the target model (CL5, LI-13). Rappaport '430 does not expressly teach bi-directional comparison between one of the geometry of the source model and the geometry of the target model with one of the respective selected points from the target model and the respective selected points from the source model, respectively. Rappaport '963 teaches comparison between one of the geometry of the source model and the geometry of the target model with one of the respective selected points from the target model and the respective selected points from the source model, respectively (Fig. 5B, Items 534 and 535; CL7, L51 to CLS, LS). It would have been obvious to one of ordinary skill in the art to perform the reverse direction comparison following reverse direction translation, similar to forward direction comparison done following forward direction translation.

Rappaport '430 does not expressly teach that the comparison circuitry is configured to measure the distances to a nearest edge from a selected point in the target model and a selected point from the source model, compare the distances in the target model and the source model, and if a difference between the compared distances falls outside of a pre-determined tolerance, initiate notification of a user of the geometric model comparator of a discrepancy between the target model and the source model. Rappaport '963 teaches that the comparison circuitry is configured to measure the distances to a nearest edge from a selected point in the target model and a selected point from the source model, compare the distances in the target model and the source model, and if a difference between the compared distances falls outside of a pre-

determined tolerance, initiate notification of a user of the geometric model comparator of

a discrepancy between the target model and the source model. (Fig. 5B, Items 534 and

535; CL7, L51 to CL8, L8); the comparison circuitry saves selected points between the

source model and the target model that do not match into an error file comprising a bad

edge pixie file (CL12, L15-24).

Response to Arguments

5.   Applicant's arguments with respect to claims 1-42 have been considered but are

moot in view of the new ground(s) of rejection.

Conclusion

6.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

7.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed Kidest Bahta whose telephone number is 571-272-3737. If

attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Paul Rodriguez can be reached on 571-272-3753. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application information Retrieval IPAIRI system. Status information for published

applications may be obtained from either Private PMR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAG system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-fee).

/Kidest Bahta/

Primary Examiner, Art Unit 2123